

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	5920	((glass or transparent) near (substrate or wafer)) near4 bond\$6	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:21
2	L2	1837	1 same (solder or ball or bond)	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:21
3	L3	100	2 same melt\$6	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:38

	L #	Hits	Search Text	DBs	Time Stamp
4	L4	74	3 and ((@ad<"20030224") or (@rlad<"20030224"))	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:41
5	L5	22213	"solder ball"	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:51
6	L6	821909 8	(via or hole or trench or recess or recess or opening or aperture)	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:52

	L #	Hits	Search Text	DBs	Time Stamp
7	L7	237507	(glass or transparent) near2 (substrate or wafer or holder or board)	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:52
8	L8	4340	5 near4 6	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:52
9	L9	376	8 and 7	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 10:52

	L #	Hits	Search Text	DBs	Time Stamp
10	L10	329	9 and ((@ad<"20030224") or (@rlad<"20030224"))	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:03
11	L11	0	kapton near4 glass near4 stencil	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:03
12	L12	200	kapton near4 glass	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:37

	L #	Hits	Search Text	DBs	Time Stamp
13	L13	6990	((438/106) or (438/116) or (438/612) or (438/613) or (438/723)).CCLS.	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:39
14	L14	153	13 and 5 and 6 and 7	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:40
15	L15	135	14 and (@ad<"20030224") or (@rlad<"20030224"))	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:42

	L #	Hits	Search Text	DBs	Time Stamp
16	L16	105	15 not 10	US- PGPUB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TD B	2005/04/02 11:42

DOCUMENT-IDENTIFIER: US 20020088986 A1

TITLE: Display device, producing method of  
electronic apparatus and display device

----- KWIC -----

Application Filing Date - APD (1):  
20011203

Summary of Invention Paragraph - BSTX (4):

[0003] Conventionally, in such a display device, a transparent electrode as anode is provided in a stripe form on a transparent glass substrate. On the stripe form transparent electrode, an organic layer is provided in an orthogonal direction. The organic layer is constituted of a positive hole transport layer and a light-emitting layer. A cathode is provided on the organic layer. With such a structure, the organic EL devices are provided at positions where the transparent electrode and the cathode intersect, and a light-emitting area is formed by arraying the organic EL devices in a matrix form. At a peripheral area of the glass substrate, an electrode portion for connecting the light-emitting area to a driving circuit is provided.

Summary of Invention Paragraph - BSTX (5):

[0004] When a positive voltage is applied to the transparent electrode as anode and a negative voltage is applied to the cathode, positive holes injected from the transparent electrode pass through the positive hole transport layer to reach the light-emitting layer. On the other hand, electrons injected from the cathode reach the light-emitting layer. Thus, in the light-emitting layer, recoupling of the electrons and positive holes occurs, whereby light with a predetermined wavelength is generated, and the light is emitted through the transparent glass substrate to the exterior.

of the transparent electrode 122 and the cathode 124, there is, for example, a single hetero type organic EL device 80 shown in FIG. 9B. The organic EL device 80 has a structure in which an anode consisting of a transparent electrode 122 of ITO (indium tin oxide) or the like is provided on a transparent substrate 121 such as a glass substrate, and an organic EL film 123 consisting of a positive hole transport layer 123a and a light-emitting layer 123b, and a cathode 124 are provided thereon.

Detail Description Paragraph - DETX (19):

[0080] The organic EL device 80 is such that, when a positive voltage is applied on the transparent anode 122 and a negative voltage is applied on the cathode 124, positive holes injected from the transparent anode 122 pass through the positive hole transport layer 123a to reach to the light-emitting layer 123b, whereas electrons injected from the cathode 124 reach to the light-emitting layer 123b, and recoupling of the electrons and positive holes occurs in the light-emitting layer 123b. At this time, light with a predetermined wavelength is generated, and is emitted through the transparent substrate 121 to the exterior as indicated by arrows in FIG. 9B.

Detail Description Paragraph - DETX (21):

[0082] The transparent substrate 121 may be, for example, a glass substrate or a plastic substrate.

Detail Description Paragraph - DETX (22):

[0083] The glass substrate may be made of soda glass, no-alkali glass, quartz glass or the like.

Detail Description Paragraph - DETX (24):

[0085] On the face side and the back side of the transparent substrate 121, gas barrier films 140 are provided. The gas barrier films 140 prevent penetration of gases such as moisture and oxygen into the device, thereby preventing deterioration of the organic EL device. The gas barrier films 140